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ABSTRACT

Several researchers have recently suggested, on limited data, that personality measures are more valid for individuals for whom inter-item variance is low. Questions remain concerning the robustness of the effect reported in these studies and whether general traitedness or traitedness within specific dimensions will moderate correlations other than self- and peer-ratings. A study was conducted to examine self-peer rating correlations, moderating effects on the correlation between adjective self-ratings and scores on scales from the California Psychological Inventory (CPI), and moderating effects on the correlation between adjective peer ratings and CPI scale scores. College students (N=81) provided self-reports and peer-ratings on seven scales built from adjectives sampling the trait-descriptive universe and scores on the same seven dimensions from the CPI. The results did not support the robustness of either general traitedness or traitedness for specific dimension in moderating the correspondence between self- and peer-ratings, self-ratings and inventory scores, or peer-ratings and inventory scores. Subjects scoring below the median of inter-item variance did not show greater correspondence among self-ratings, peer-ratings, and CPI scores, casting doubt on the pervasiveness of the moderating effect of intraindividual variance in item responding. (Author/NB)

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Moderating Effects of Intraindividual Variance across the Trait Descriptive Universe

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Abstract

Several researchers have recently suggested, on limited data, that personality measures are more valid for individuals for whom inter-item variance is low. The present study obtained from 81 subjects self-reports and peer ratings on seven scales built from adjectives sampling the trait-descriptive universe and scores on the same seven dimensions from the California Psychological Inventory (CPI). Subjects scoring below the median of inter-item variance did not show greater correspondence among self-ratings, peer ratings, and CPI scores, casting doubt on the pervasiveness of the moderating effect of intraindividual variance in item responding.

Paper presented at the 58th Anuual Meeting of the Eastern Psychological Association, Arlington, VA, April, 1987.

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(1) Title of Paper: Moderating Effects of Intraindividual Variance Across the Trait Descriptive Universe

(2) Topical Session Preference: Personality Measurement

(3) Problem or Major Purpose:

Recently Amelang and Borkenau (1986) and Baumeister and Tice (1986) have elaborated on an earlier suggestion (Allport, 1937; Bem and Allen, 1974) that not all personality trait dimensions apply equally well to everyone. Both recent researchers report that a trait dimension may be most relevant for persons showing little variance in responses to individual items on a trait scale. For example, a trait may be more applicable for a person who responds "6" (on a scale from 1 to 9) to every item on a scale than for a person who divides responses equally among "4," "5," "6," "7," and "8." In both cases the average item response is 6, but the former case shows less intraindividual response variance (or, more intraindividual response consistency) than the latter case. Baumeister and Tice refer to the former type of person as "traited," and the latter, "untraited."

Amelang and Borkenau's position differs from Baumeister and Tice's in that the former researchers claim that traitedness is a general disposition that will moderate trait applicability across all dimensions, whereas Baumeister and Tice suggest that traitedness is specific to each trait under consideration. Amelang and Borkenau's (1986) claim is based on data showing that intraindividual response variance does not moderate self- versus peer ratings within specific trait dimensions; however, a general index of intraindividual response variance (the sum of variances across all scales) appears to moderate self-peer correspondence. For all six trait scales, the correlation between self- and peer

ratings was higher for traited than untraited persons. The differences reached statistical significance in three out of six cases.

Baumeister and Tice present no data on the effect of traitedness on self-peer correspondence, but do present evidence that intraindividual response variance on a specific trait dimension (locus of control in their study) can affect the relationship between trait scores and other behavior (practicing for a test and attributions of performance in their study).

The Amelang and Borkenau data appear to show directly and definitively that "general traitedness," but not "trait-specific traitedness," moderates the correspondence between self-ratings and peer ratings of personality. The present study seeks to replicate their findings while simultaneously addressing some questions left unanswered from their study.

One unanswered question concerns the robustness of the effect they appeared to find. Indeed, their correlations for traited persons were higher than for untraited persons for all six scales, but the differences were statistically significant in only half the cases. Furthermore, we have no indication that the scales used in the study (borrowed from the Bem and Allen study) are representative of the trait-descriptive universe. The present study tests whether general or trait-specific traitedness will moderate self-peer correlations in an additional sample of subjects on seven adjective scales that comprehensively sample the trait-descriptive universe.

The second unanswered question is whether general traitedness or traitedness within specific dimensions will moderate correlations other than self- and peer ratings. Therefore, in addition to (a) self-peer rating correlations, the present study also examines moderating effects on the correlation between (b)

adjective self-ratings and scores on scales from the California Psychological Inventory (CPI; Gough, 1975); and (c) adjective peer ratings and CPI scale scores. Examining the moderating effects of traitedness on peer ratings and CPI scores are particularly significant, because potential method contamination (using self-report adjectives to determine item variance and for self-description) is removed.

(4) Subjects:

Subjects were 84 undergraduate students enrolled in an introductory psychology course. Data from three students were incomplete, leaving 81 subjects. Subjects received extra credit for their participation.

(5) Procedure:

Measurement of Personality with the BARS. Subjects rated themselves on 49 7-point, Likert-scale adjective pairs. They also had three persons who knew them well rate them with the scales. These peer ratings were returned confidentially to the investigator to encourage honesty. Most of the 49 scales in this set of bipolar adjective rating scales (BARS) were derived from similar scales successfully used by Hogan and Johnson (1981). Normally, the 49 single-item scales are clustered into seven superordinate scales: Mentality, Power, Likeableness, Poise, Novelty, Sociability, and Conscientiousness. The superordinate scales assess the same dimensions measured by the primary scales of the Hogan Personality Inventory (HPI; Hogan, 1986): Intellectance, Ambition, Likability, Adjustment, Prudence, and Sociability. (Hogan's Prudence scale originally consisted of two separate scales: Ego Control, corresponding to Novelty--cf. Laufer, Johnson, & Hogan, 1981--and Prudence itself, corresponding to Conscientiousness. Ego Control, although intended to be conceptually unique,

appeared to be psychometrically identical to Prudence, leading Hogan to join the scales--cf. Johnson, 1983). The scales on the BARS were purposely given different names, not to confound the reader, but to distinguish them from the HPI scales.

Measurement of Personality with the CPI-HPI. Subjects also completed the California Psychological Inventory (CPI; Gough, 1975). The CPI can be scored to assess the same seven dimensions measured by the BARS and the HPI (see Hansson, Hogan, Johnson, & Schroeder, 1983; Hogan, Carpenter, Briggs, & Hansson, 1986; and Hogan & Johnson, 1981).

Analyses. Variances were computed for each of the seven self-report BARS scales. Subjects were classified as "traited" on an individual trait scale if they scored above the median variance on that scale, and "untraited" if they scored below the median. Variances were intercorrelated factor-analyzed by principle components to test for the presence of a general traitedness factor. Variances were summed, the median was determined, and subjects were classified as "generally traited" if above this median, and "generally untraited" if below.

Three sets of correlations were computed for the entire sample: BARS self-reports with BARS peer ratings, BARS self-reports with CPI-HPI scales, and BARS peer-ratings with CPI-HPI scales. Separate correlations were then computed for generally traited and generally untraited subjects, and for subjects traited and untraited on each of the seven dimensions. Correlations were converted to z-scores by Fisher's transformation, and the magnitude of difference between traited and untraited subjects was tested for statistical significance.

(6) Results of Findings

The average intraindividual variance correlation across the seven BARS scales (.20) was not nearly as substantial as the mean variance correlation reported by Amelang and Borkenau (1986)--.48. The principal components factor analysis did replicate Amelang and Borkenau's finding of a general traitedness factor, although the Sociality scale showed a substantial loading on a second factor. This justifies summing variances across the seven scales to form a general variance score to define general traitedness or untraitedness.

A comparison of correlations for traited versus nontraited individuals (both general and for specific scales) can be found in Table 1. For general traitedness, traited individuals had higher correlations than untraited individuals 11 out of 21 times. None of the differences reached statistical significance. The potential moderating effect of traitedness on specific dimensions showed that traited individuals had higher correlations 95 out of 147 times, but only four of these differences (3% of the 147 correlations) reached the .05 level of statistical significance.

Insert Table 1 about here

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(7) Conclusions:

The present data do not support the robustness of either general traitedness or traitedness for specific dimension in moderating the correspondence between self- and peer ratings, self-ratings and inventory scores, or peer ratings and inventory scores. "Eyeballing" the data might give the mistaken impression that a moderating effect does exist, but statistical tests suggest the possible

effects are due to chance. The optimistic conclusions drawn by Amelang and Borkenau, based on six pairs of correlations, and by Baumeister and Tice, based on one experiment, may be premature.

The present data do not rule out the possibility that either general or specific traitedness exists, and that it has a moderating influence on the validity of personality measurement in certain circumstances. The study does suggest, however, that such moderating influences--defined by intraindividual variance--may not be as pervasive as other researchers have hoped.

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Table 1

Moderating Effects of Traitedness across the Trait-Descriptive Universe

	Full Sample	Traitedness Moderating Variable													
		General		MEN		POW		LIK		POS		NOV		SOC		CON	
		TR	UT	TR	UT	TR	UT	TR	UT	TR	UT	TR	UT	TR	UT	TR	UT
Self-Ratings/ Peer Ratings																	
MEN	47	48	47	47	50	56	38	60	29	60	39	53	44	49	46	49	47
POW	53	58	51	55	53	74	30	58	49	61	46	51	55	68	40	61	48
LIK	53	59	47	43	62	55	51	53	51	74	29	54	53	43	63	54	50
POS	53	53	55	56	52	54	50	60	48	57	47	60	47	53	52	58	45
NOV	44	51	39	43	44	41	43	61	27	42	49	42	44	57	31	47	37
SOC	74	76	73	76	73	77	73	81	66	74	73	69	77	80	64	70	78
CON	57	55	59	63	47	66	50	52	62	62	53	58	57	54	61	52	59
Self-Ratings/ CPI-HPI Scores																	
INT	38	53	29	41	32	50	26	47	35	50	29	47	32	52	23	53	23
AMB	70	64	76	72	69	72	69	61	79	74	67	69	77	74	66	76	64
LIK	51	54	39	24	66	61	43	62	36	56	43	60	41	51	51	43	61
ADJ	66	53	72	54	74	69	64	62	71	76	45	60	70	54	70	65	64
EGO	27	10	43	28	28	30	25	07	40	21	28	41	11	21	34	02	42
SOC	72	79	64	74	69	73	72	73	68	79	65	76	70	74	65	75	68
PRU	52	42	63	54	54	47	57	49	56	41	61	63	45	41	63	30	60
Peer Ratings/ CPI-HPI Scores																	
INT	54	54	56	53	58	65	40	58	52	45	59	59	50	53	56	57	51
AMB	32	30	37	30	33	47	15	26	35	36	28	22	39	44	24	46	21
LIK	40	43	38	26	52	21	53	47	31	36	39	50	28	27	51	41	35
ADJ	37	27	46	32	42	32	42	34	40	39	32	38	35	29	41	36	37
EGO	16	02	37	15	19	18	15	12	19	20	15	18	16	05	32	13	42
SOC	67	73	61	61	74	70	64	74	58	74	59	62	72	75	54	67	66
PRU	50	63	39	68	34	52	50	55	46	55	47	63	33	54	48	42	52

Note. Total N = 81, rs greater than .19 are significant at at least the .05

level, greater than .26, at the .01 level (one-tailed). Ns for traited and untraited subgroups are 40 or 41, varying across scales, rs greater than .27 are significant at at least the .05 level, greater than .37, at the .01 level (one-tailed). Decimal points are omitted from all correlation coefficients. Underlined pairs of correlation coefficients are significantly different at at least the .05 level, two-tailed. TR=Traited; UT=Untraited. Abbreviations for corresponding BARS and CPI-HPI scales: MEN-INT (Mentality-Intellectance); POW-AMB (Power-Ambition); LIK-LIK (Likeableness-Likeability); POS-ADJ (Poise-Adjustment); NOV-EGO (Novelty-Ego Control); SOC-SOC (Sociality-Sociability); CON-PRU (Conscientiousness-Prudence).

[a]Novelty (NOV) scales scores reversed in sign to correspond to direction of scoring for Ego Control (EGO).